



## Installation

Installation principles:

- Water treatment equipment:  
**polyethylene** / Ellipse, Aronde and sphere range p.88 to 91
- Forms to fill in:  
Oil separator selection \_\_\_\_\_ p. 92  
Grease separator selection \_\_\_\_\_ p. 93





# Installation Water treatment system

Wastewater

Polyethylene

Storm water

Ellipse / Aronde  
TechneauSphère



**Installation instructions delivered with the system remain reference instructions**

## A / Preface

### 1 - Manoeuvring:

**Before each attempting to manoeuvre the separator, any residual water in the various compartments shall be pumped out.**

Polyethylene tanks are easily damaged by forklift trucks during manoeuvring, proceed with caution.

**Do not attempt to push against the separator tank with a forklift.** Basis of equipments (range Sphère) are integrating dedicated shapes for forks arches.

Any manoeuvring of the separator should be undertaken using appropriate lifting machinery.

In the case of separators equipped with lifting straps **make sure you use all straps simultaneously.**

Once suspended, the separator should be guided by means of ropes.

### 2 - Delivery and storage:

Make sure, by visual inspection, that the outer shell has not been damaged.

*Any defect should be noted on the transporter's delivery document.*

Place the separator on chocks, away from any potential risk of impacts. No rain water should be allowed to enter the tank.

### 3 - Installation:

**Under no circumstances fill the tank with water whilst above ground.** Should a water tightness test be required, it should only be undertaken after having completed step 5 of this notice. A comparison of the water level should then be made 12 hours after filling.

**Under no circumstances should any mechanical compacter be used** to stabilise the backfill around the separator.

**Under no circumstances should any concrete element be put directly on the separator** make a suitable slab.

**Always place the separator on a bed of sand.**

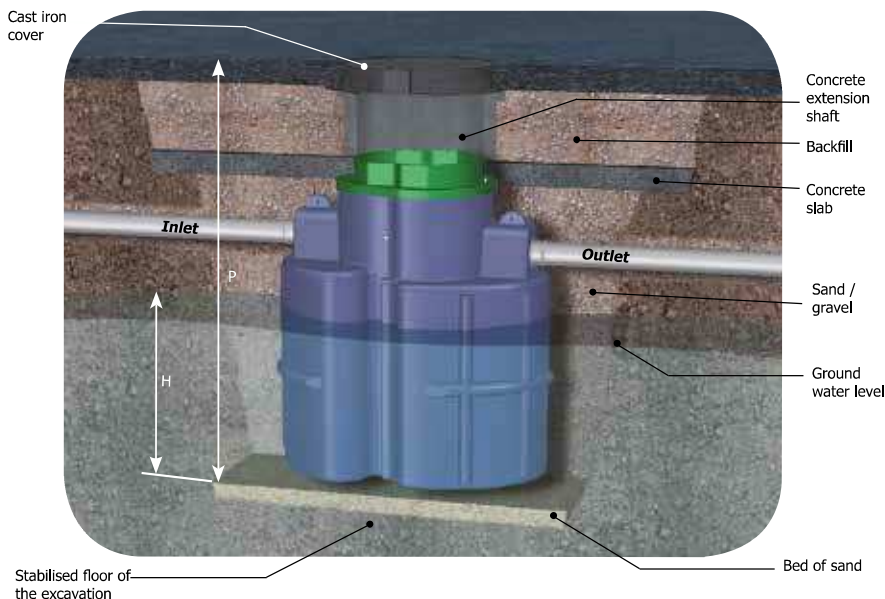
### 4 - Mechanical strength:

The temperature within the separator should under no circumstances exceed **30°C**.

The manhole cap does not replace the cover.

The separator is designed to withstand a static load corresponding to the following maximum depth of backfill:

**ELLIPSE range: P < 2.5m; ARONDE range: P < 2m**  
(P is defined in the diagram below)



Where the installation depth exceeds the above figures **a load-spreading concrete slab should be poured** (see step 11). **This slab should extend beyond the edges of the excavation.** *The structural dimensions of such a slab should be determined by a civil engineering design office.*

In case of **vehicular traffic**, a load protection slab must be poured regardless of the installation depth.

The presence of **specific dynamic loads** can occasionally require **peripheral reinforcement** in addition to the load-spreading slab (*contact your civil engineering design office*).



**The ARONDE range cannot be installed where ground water is present.** Particular attention should be paid to the presence of ground water, hydromorphic earth, or impermeable ground (rock or clay) which can retain surface water. When there is a risk of flooding steps B/1 and B/4 are compulsory.



# Installation water treatment system

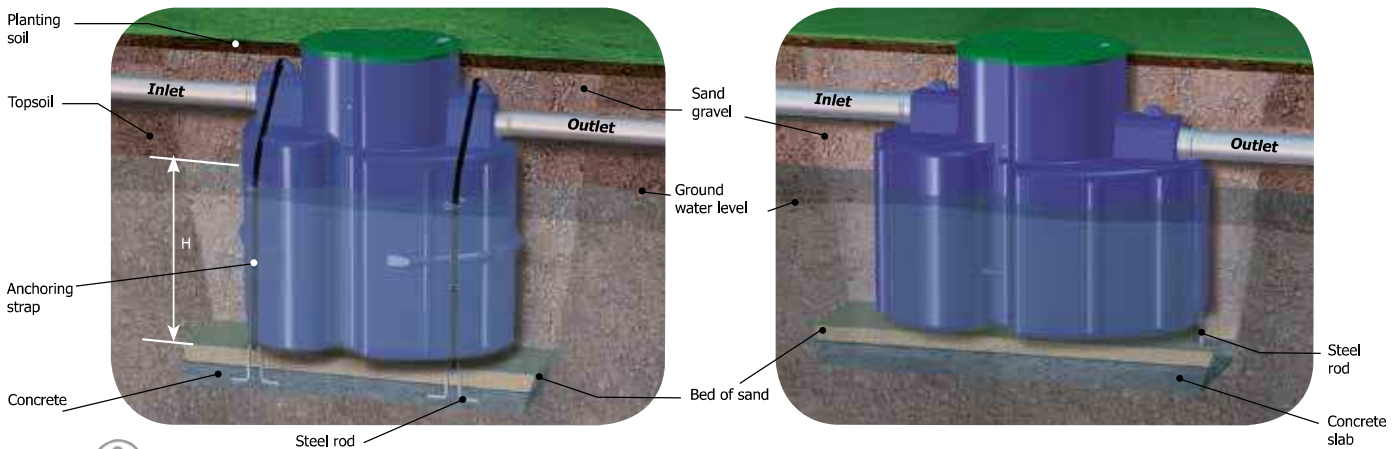
Wastewater

Polyethylene

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Polyethylene tank  
Ellipse / Aronde / TechneauSphère

For the Ellipse range, the maximum depth of the water table (H) is 750 mm if the manhole cover (with no extension) is at ground level. In the case of the separator being buried deeper, please contact our design office in order to establish the maximum depth H.



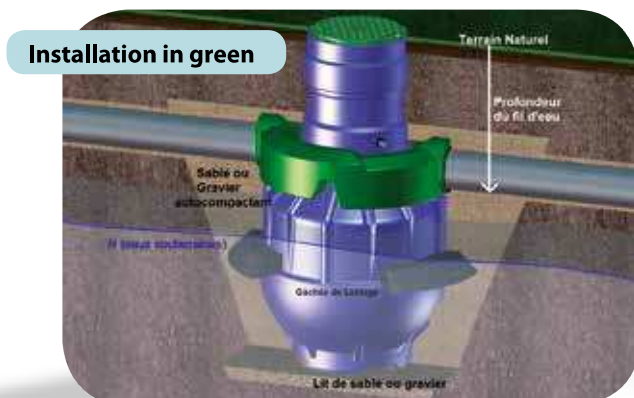
**Note concerning grease or starch separators: these systems may produce unpleasant odours. It is therefore essential that the inlet and outlet pipes are both correctly ventilated.**

## 5 - Fundamental precautions

- Always install the separator on a bed of sand or gravel (0<15mm)
  - Under no circumstances should any form of mechanical compacter be used to stabilise the backfill around the separator.
  - Under no circumstances should any concrete element be put directly on the separator, make a suitable floating slab (no transfer of load should be possible between the slab and the separator).
  - The temperature within the separator should under no circumstances exceed **40°C**.
  - In the event of dynamic loads (for example : **vehicular traffic**) over the finished installation, a **load protection** slab is necessary regardless of the installation depth. **This protection slab must be a floating slab** and should extend beyond the edges of the excavation.
  - The presence of **certain dynamic load can occasionally** require **peripheral reinforcement** in addition to the load spreading slab (For further details please consult a qualified civil engineer).
  - In case of vehicular traffic above **the separator the plastic cover shall be removed** and replace by a suitable cast iron.
  - Particular attention should be paid to the **presence of ground water , hydromorphic earth, or impermeable ground** (rock or clay) which can retain surface water. When there is a risk of flooding steps 5 and or 11 are compulsory. Check the site soil survey to assess the risk of water presence in contact with the separator.
- The separator can take the static loads ( backfill and hydrostatic pressure) associated to the following borderline cases :

TechneauSphère Range	Risk of groundwater in contact with the separator (cf § Fundamental precautions above)		Lack of groundwater in contact with the separator
	Fe (Maximum depth of Inlet level / Ground level)	N (Maximum level of ground water)	Fe (Maximum depth of Inlet level / Ground level)
Standard separator	1 m	$N \leq Fe$ separator	1,5m
Reinforced separator	1,5 m	$N \leq$ Ground level	3 m

- Where the installation depth exceeds the above figures, a load spreading concrete slab should be used (cf #11)







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Polyethylene tank  
Ellipse / Aronde / TechneauSphère

## B / Installation procedure for underground separators (Ellipse / Aronde range)

- 1 • Stabilise the bottom of the excavation and make sure it is horizontal.  
If necessary to anchor the separator (see § 'Mechanical Strength'), pour a concred base slab incorporating steel reinforcement rods.  
*The necessary volume of concrete should be calculated to compensate the buoyancy of the empty separator*
- 2 • Lay a 100 mm bed of sand on the stabilised floor of the excavation.
- 3 • Place the separator in the excavated trench after having removed any protective material.
- 4 • Anchor the separator using the anchoring straps (option). *If fixing brackets are supplied, use them for this purpose (see diagram above).*
- 5 • Backfill with sand around the separator in layers no more than 300 mm deep.  
*Fill the separator with water simultaneously and make sure the backfill level and the water level remain balanced.*  
Stabilise the backfill by hosing each layer with water.  
Particular attention should be paid to fill any gaps around the separator.  
Continue as described until reaching the level of inlet and outlet pipework.
- 6 • Connect the inlet, outlet and ventilation duct (a ventilation duct is compulsory for grease separators and those equipped with an emptying column).  
Sleeves are provided for PVC tube

*Pipelines connected to grease separators (upstream and downstream) shall be adequately ventilated. The discharge pipe to the separator shall be provided with a stack vent and branch ventilating pipes shall be connected to all upstream branch pipes more than 5 m long.*

*Where the nearest vent is further than 10 m upstream of the grease separator, the supply pipe shall be fitted with an additional vent pipe, terminating as close as possible to the separator*

- 7 • Connect the alarm devices using sleeves for routing the cables.
- 8 • If necessary, raise the float of the closing device until the maximum water level is reached and stable.
- 9 • Backfill with 10-14 gravel up to the level of the manholes shaft.
- 10 • Stabilise the backfilled area by hosing with water.
- 11 • If necessary (see § 'Mechanical Strength'):
  - cut the manhole cap with a knife (BCE) at the level of the groove
  - pour the load-spreading concrete slab.
- 12 • Fit manhole extension shafts and adjust their height to that of the surrounding ground level.
- 13 • Complete backfilling with topsoil.

**ARONDE range cannot be installed where ground water is present .**

## C / Installation procedure for underground separators (TechneauSphère range)

- 1 • Stabilise the bottom of the excavation and make sure it is horizontal.
- 2 • Lay a 100 mm bed of sand or gravel ( $\emptyset < 15\text{mm}$ ) on the stabilised floor of the excavation.
- 3 • Place the separator in the excavated trench after having removed any protective material, make sure it is horizontal.
- 4 • Introduce 200 litres of water inside the separator to stabilise it. Backfill with gravel ( $\emptyset < 15\text{mm}$ ) around the tank in layers no more than 300 mm deep.
  - Fill the separator with water simultaneously and make sure the backfill level and the water level remain balanced.
  - Make sure it is stabilised between each layer.
  - Particular attention should be paid to fill any gaps around the separator.
  - Continue as described in all the spheric base part.
- 5 • If necessary to anchor the separator (see paragraph Mechanical Strength), make a batch of concrete around the belt in the middle of the tank.  
The necessary volume of concrete should be calculated to compensate the buoyancy of the empty separator.
- 6 • Connect the inlet, outlet and ventilation duct (compulsory for grease separators equipped with an emptying column). Sleeves are provided for PVC tube.

*Note concerning grease and starch separators: these systems may produce unpleasant odours. It is therefore essential that the inlet and outlet pipes are both correctly ventilated, according to the EN1825-2 standard.*

- 7 • Connect the alarm devices using sleeves for routing the cables.
- 8 • If necessary, raise the float of the closing device until the maximum water level is reached and stable.
- 9 • Backfill with gravel ( $\emptyset < 15\text{mm}$ ) up to the level of the pipes.
- 10 • Make sure it is stable.
- 11 • If necessary (see paragraph fundamental precautions): pour the protection slab. This protection slab can also ensure the ballasting job (then step n° 5 becomes optional).
- 12 • Fit the extension shafts if there are some and adjust their height to that of the surrounding ground level.  
In case of concrete extension, make a sitting base «floating base» (see paragraph fundamental precautions) and remove the plastic cover.
- 13 • Complete the backfilling on top of the pipes with gravel or topsoil.



**Installation instructions delivered with the separator remain reference instructions.**



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Polyethylene tank  
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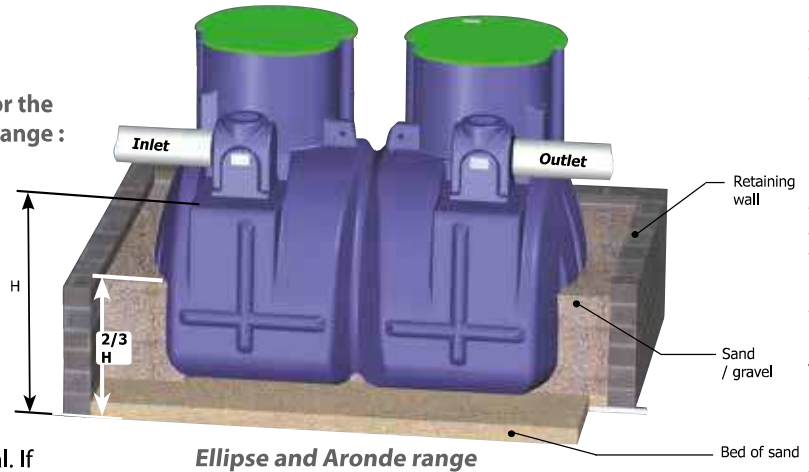
**Installation instructions delivered with the system remain reference instructions**

## 1ae - Installation procedure for aboveground separators:



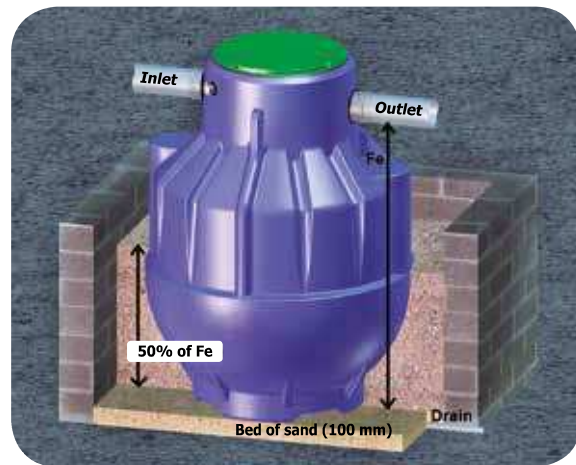
Note : steps 2 and 5 become facultative for the following references of Techneausphère range :

**YH0501E, YH1001E, YH2003E, YH0503E, YH1003E, YH1502E, YG0500E, YG1501E, YG3000E, YG3500E, YG0501E, YG1001E, YG2000E, YG2500E, YG3002E, YG3502E, YG0502E, YG1002E, YG1503E, YD0340E and YD0660E as for references YH\*\*\*\*RE and YG\*\*\*\*RE (Green and reinforced tanks)**



Ellipse and Aronde range

- Make sure the soil is stable, level and horizontal. If necessary, pour a base slab to ensure these criteria are met.
- Build up a retaining wall respecting the dimensions given in the diagram below.  
A space of 200 mm at least must be allowed between the tank and the wall.
- Lay a bed of sand 100 mm deep.
- Having first removed any protective material used during transport lay the separator in the excavated trench.
- Backfill with gravel (0<15mm) around the separator in layers no more than 300 mm deep.
  - Fill the separator with water simultaneously and make sure the backfill level and the water level are balanced.
  - Level and stabilise the backfill by hosing each layer with water.
  - Particular attention should be paid to fill any gaps around the separator.
  - Continue as described until reaching a  $\frac{2}{3} * H$  height:  $\frac{2}{3}$  of Height for range Ellipse and Aronde
  - Continue as described until reaching 50% of the inlet level of the separator for the model Sphère
- Connect the inlet, outlet and ventilation duct (a ventilation duct is compulsory for grease separators and those equipped with an emptying column).  
*Sleeves are provided for PVC tube.*
- Connect the alarm devices.
- Complete filling the separator with water.
- In the case of an oil separator, raise the float of the closing device, if necessary, until the correct working water level has been reached and is stable.



TechneauSphère range

**For any other model,  
consult our website [www.techneau.com](http://www.techneau.com)**

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